Journal of Glaciology, Vol. 14, No. 70, 1975

GLACIOLOGICAL LITERATURE

THIS is a selected list of glaciological literature on the scientific study of snow and ice and of their effects on the Earth; for the literature on polar expeditions, and also on the "applied" aspects of glaciology, such as snow ploughs, readers should consult the bibliographies in each issue of *Recent Polar Literature* (supplement to the *Polar Record*). For Russian material the system of transliteration used is that agreed by the U.S. Board on Geographic Names and the Permanent Committee on Geographical Names for British Official Use in 1947. Readers can greatly assist by sending reprints of their publications to the Society, or by informing Dr J. W. Glen of publications of glaciological interest. It should be noted that the Society does not necessarily hold copies of the items in this list, and also that the Society does not possess facilities for microfilming or photocopying.

GENERAL

[ICE: ISOTOPIC COMPOSITION: CHINA.] Distribution of isotopes in some natural waters in the region north of Mt. Jolmo Lungma. *Scientia Sinica*, Vol. 16, No. 4, 1973, p. 560–64. [Samples from glacier ice and snow-pack as well as other waters at 4 550–7 029 m a.s.l. near Mt Everest show less D_2O and ^{18}O than SMOW, although D_2O is less depleted in solid phase samples.]

LESCA, C. La rappresentazione cartografica delle aree glaciali: procedimento fotografico per la realizzazione di ortofotografie al tratto. *Bollettino della Associazione Mineraria Subalpina*, An. 9, Nos. 3–4, 1972, p. 107–14. [Deals with problems of presenting glacial features on maps.]

SWITHINBANK, C. W. M., *ed.* An international glaciological programme for the Antarctic Peninsula: report of a meeting held in Cambridge, England, 27–30 April 1973. *Polar Record*, Vol. 17, No. 106, 1974, p. 86–98. [Presents in some detail the objects of this meeting to co-ordinate glaciological research in this area.]

GLACIOLOGICAL INSTRUMENTS AND METHODS

ADEY, A. W., *and others*. Field tests of a UHF radiometer for determining ice thickness, [by] A. W. Adey, R. E. Barrington and T. R. Hartz. (*In* White, D., *ed. Resources satellites and remote airborne sensing for Canada. Proceedings of the first Canadian symposium on remote sensing, Ottawa, February 1972. Vol. 1.* Ottawa, Dept. of Energy, Mines and Resources. Canada Centre for Remote Sensing, 1972, p. 287–92.) [Presents results of tests conducted at Resolute, Cornwallis Island, Northwest Territories, Canada, using radiometer operating at frequencies in range 0.4 to 2.3 GHz.]

BENESTAD, O. M. Teledybdemåling. *Frost i Jord*, Nr. 7, 1972, p. 35–42. [Describes instrument for measuring depth of frozen soil. English summary, p. 42.]

CHEREPANOV, N. V., *and* VASIL'YEV, A. G. Stanok dlya izgotovleniya shlifov l'da [Apparatus for preparing a section of ice]. *Problemy Arktiki i Antarktiki*, Vyp. 42, 1973, p. 92–93.

GLAZYRIN, G. YE., *and* SHANTYKOVA, L. N. Dva metoda opredeleniya sredney mnogoletney snegovoy linii na lednikakh [Two methods of determining the mean snow-line on glaciers]. *Izvestiya Akademii Nauk SSSR. Seriya Geograficheskaya*, 1973, No. 5, p. 128–35.

GRASTY, R. L., *and* HOLMAN, P. B. The measurement of snow water equivalent using natural gamma radiation. (*In* White, D., *ed. Resources satellites and remote airborne sensing for Canada. Proceedings of the first Canadian symposium on remote sensing, Ottawa, February 1972. Vol. 2.* Ottawa, Dept. of Energy, Mines and Resources. Canada Centre for Remote Sensing, 1972, p. 633–45.) [Possible to measure water equivalent snow depth of 18 cm ± 2 cm by monitoring absorption in potassium, uranium, thorium and total count channels.]

JOHANSEN, Ø. Beregningsmetode for varmeledningsevne av fuktige og frosne jordarter. Del 1. Teoretisk grunnlag. *Frost i Jord*, Nr. 7, 1972, p. 17–25. [Theoretical discussion of methods for calculating thermal conductivity of frozen soils. English summary, p. 24–25.]

MACKAY, J. R. Performance of a heat transfer device, Garry Island, N.W.T. Project 680047. *Canada. Geological Survey. Paper* 74-1, Pt. B, 1974, p. 252–54. [Cooling effect of device studied for one year, and found to be limited.]

OSTBYE, E. A portable device for measuring temperature profiles in snow. *Norwegian Journal of Zoology*, Vol. 21, No. 3, 1973, p. 263–66. [Battery operated device consisting of electric thermometer connected to measuring probe 180 cm long, with ten thermocouples placed along the probe.]

SINHA, A. Determination of sea-ice thickness by electromagnetic means. Project 730004. *Canada. Geological Survey. Paper* 74-1, Pt. B, 1974, p. 111–12. [Theoretical study shows that the two systems investigated are capable of thickness measurements up to 6–7 m.]

PHYSICS OF ICE

BOGORODSKIY, V. V., *and others*. Vnutrenneye treniye l'da (obzor) [Internal friction of ice (a review)]. [By] V. V Bogorodskiy, V. P. Gavrilo, V. S. Grigor'yev. *Akusticheskiy Zhurnal*, Tom 19, Vyp. 4, 1973, p. 478–85 [Temperature variation follows Arrhenius law with activation energy of 13.2 kcal/mole.]

BRYSON, C. E., III, *and* LEVENSON, L. L. Critical cluster size determination from sticking coefficient and flash desorption measurements. *Surface Science*, Vol. 43, No. 1, 1974, p. 29–43. [Sticking coefficient of CO_2 molecules on ice between 72.4 and 74.4 K.]

CROWE, R. W., *and* SANTRY, D. P. Molecular orbital theory for infinite molecular aggregates: application to idealized hexagonal and cubic ices. *Chemical Physics*, Vol. 2, No. 3, 1974, p. 304–20. [Calculations for ordered ice Ih and Ic. Hexagonal is found to be more stable.]

FALABELLA, B. J., *and* VANPEE, M. Experimental determination of gas hydrate equilibrium below the ice point.

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Industrial and Engineering Chemistry. Fundamentals, Vol. 13, No. 3, 1974, p. 228–31. [Experimental determination at pressures below 1 atm and temperatures down to 148 K for methane and ethane hydrates.]

Feng, Da-Fei. I. A semicontinuum model for solvated and trapped electrons in polar liquids and solids. II. Electron-electron double resonance study of trapped electrons in alkaline ice and 2-methyltetrahydrofuran. *Dissertation Abstracts International*, B, Vol. 34, No. 12, Pt. 1, 1974, p. 5926-B–27-B. [Results support tetrahedral model of oriented water dipoles around trapped electron in alkaline ice. Abstract of Ph.D. thesis, Wayne State University, 1973. University Microfilms order no. 74-11097.]

Garabedian, H., *and* Strickland-Constable, R. F. Collision breeding of ice crystals. *Journal of Crystal Growth*, Vol. 22, No. 3, 1974, p. 188–92. [Measurement of number of crystals produced when a single ice crystal is introduced into supercooled water with or without stirring.]

Genadiev, N. P., *and* Levkov, L. Ice formation on CuS particles. *Doklady Bolgarskoy Akademii Nauk*, Tom. 27, No. 4, 1974, p. 471–73. [Observations of conditions under which CuS can nucleate supercooled water.]

Gilra, N. K. Non-basal glide in ice. *Physica Status Solidi*, A, Vol. 21, No. 1, 1974, p. 323–27. [Non-basal glide explained as due to splitting of basal $\langle 11\bar{2}0\rangle$ dislocations into $\langle 10\bar{1}0\rangle$ partial dislocations. Energy to constrict partials deduced from non-basal glide data agrees with that deduced from electron microscope observations.]

Gosar, P. Theory of anelastic relaxation of cubic and hexagonal ice. *Philosophical Magazine*, Eighth Ser., Vol. 29, No. 2, 1974, p. 221–40. [Elastic properties of an ice crystal with frozen hydrogen disorder and thermodynamic calculation of anelastic relaxation.]

Gough, S. R., *and others*. Ordering of guest-molecule dipoles in the structure I clathrate hydrate of trimethylene oxide, [by] S. R. Gough, S. K. Garg and D. W. Davidson. *Chemical Physics*, Vol. 3, No. 2, 1974, p. 239–47. [Rotational mobility of this molecule studied down to 1.8 K by sub-MHz dielectric measurements of H_2O clathrate and proton magnetic resonance of D_2O clathrate. Transition occurs at *c.* 105 K.]

Ham, J. S., *and* Rose, D. N. Hall mobility measurements in hydrogen fluoride doped ice. *Journal of Chemical Physics*, Vol. 60, No. 12, 1974, p. 4778–79. [Double frequency method used on Mendenhall Glacier ice doped with HF gives very small signal indicating a mobility of $4.8\pm2.8\times10^{-3}$ cm^2 V^{-1} s^{-1} at $-5°$ C.]

Huang, T., *and others*. Electron drift and Hall mobility in γ-irradiated 10*M* NaOH glassy alkaline ice, [by] T. Huang, I. Eisele and L. Kevan. *Journal of Chemical Physics*, Vol. 59, No. 12, 1973, p. 6334–49. [Determination of these parameters which indicate electron transport is well characterized by a band model.]

Kell, G. S. Distribution function and angular deformations of a model related to vitreous ice and liquid water. *Canadian Journal of Chemistry*, Vol. 52, No. 10, 1974, p. 1945–53. [Plastic and wire model of non-crystallographic tetrahedral structure with constant nearest neighbour distance used to deduce variations from tetrahedral angle.]

Kloubek, J. Calculation of surface free energy components of ice according to its wettability by water, chlorobenzene, and carbon disulfide. *Journal of Colloid and Interface Science*, Vol. 46, No. 2, 1974, p. 185–90. [Qualitative difference found between water and ice surface, ice being predominantly non-polar. Both liquids change nature of ice surface.]

Kobayashi, T., *and* Ohtake, T. Hexagonal twin prisms of ice. *Journal of the Atmospheric Sciences*, Vol. 31, No. 5, 1974, p. 1377–83. [Grooves observed when prismatic ice crystals are evaporating disappear when they are growing. Explanation proposed suggesting interface contains rotation twinning.]

Mizuno, Y. Shimo no kesshō no X-sen topogurafu [X-ray topographic observation of hoar crystals]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 279–82. [Lang technique used to reveal internal dislocations in hoar crystals.]

Mizuno, Y. X-sen ni yoru kōri no kesshō kekkan no kenkyū. I [Studies on ice crystal imperfections by X-rays. I]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 17–31. [Divergent X-ray technique used to study dislocations in Mendenhall Glacier ice. Small extensions caused dislocations to disappear. Movement near bubbles and rock fragments also studied. English summary, p. 29–31.]

Montmory, R. Sur un mode de formation des cristaux de glace à partir de la phase vapeur. *Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences* (Paris), Sér. B, Tom. 278, No. 14, 1974, p. 675–77. [Formation of ice from the vapour phase may be explained by a mechanism involving the liquid phase even though its macroscopic appearance is a direct vapour-solid condensation.]

Nechayev, E. A., *and* Ivanov, I. A. Izucheniye dvoynogo elektricheskogo sloya na granitse razdela led–rastvor elektrolita [Investigation of the electric double layer at the ice–electrolyte solution interface]. *Kolloidnyy Zhurnal*, Tom 36, Vyp. 3, 1974, p. 583–85. [Adsorption of H^+ and OH^- ions on snow surface studied by titration method. Results imply surface can only have a negative charge. English summary, p. 585.]

Nishibata, K., *and* Whalley, E. Thermal effects of the transformation ice III–IX. *Journal of Chemical Physics*, Vol. 60, No. 8, 1974, p. 3189–94. [Heat and entropy of transformation measured and found to be smaller than expected values if ice IX were fully ordered.]

Novikov, P. A., *and others*. Issledovaniye raspredeleniya davleniya mezhdu parallel'nymi plastinami pri molekulyarno-vyazkostnom rezhime techeniya para v protsesse sublimatsii l'da [Distribution of pressure between parallel plates during molecular-viscous vapour flow during ice sublimation process]. [By] P. A. Novikov, G. I.. Malenko, L. Ya. Lyubin. *Inzhenerno-Fizicheskiy Zhurnal*, Tom 26, No. 1, 1974, p. 58–63. [Equations derived and tested against vapour pressure as measured with a thermocouple manometer. English summary, p. 63.]

Pearson, R. T., *and* Derbyshire, W. NMR studies of water adsorbed on a number of silica surfaces. *Journal of Colloid and Interface Science*, Vol. 46, No. 2, 1974, p. 232–48. [Freezing of water adsorbed on four types of amorphous silica studied between -196 and $+30°$ C.]

Shewchuk, S. R. Electrification associated with the collision of drops with ice particles. *Dissertation Abstracts International*, B, Vol. 34, No. 10, 1974, p. 5122-B. [Experiments on electrification when drops of pure or salt water impact on ice with or without applied electric field. Abstract of Ph.D. thesis, University of Toronto, 1972. Microfilm copies from National Library of Canada, Ottawa.]

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SHIRAISHI, H., *and others*. Electron spin polarization effects in a study of transient hydrogen atoms in acidic ices under electron irradiation, [by] H. Shiraishi, H. Kadoi, Y. Katsumura, Y. Tabata, K. Oshima. *Journal of Physical Chemistry*, Vol. 78, No. 13, 1974, p. 1336–37. [Observations of electron spin resonance of H atoms in H_2SO_4 and HCl doped ice to indicate chemically induced dynamic electron polarization.]

STOW, C. D., *and* SYMS, P. H. On the measurement of the thermoelectric effect on ice. *Quarterly Journal of the Royal Meteorological Society*, Vol. 100, No. 425, 1974, p. 472–75. [Criticism of experiment of J. Latham, ibid., Vol. 90, No. 385, 1964, p. 266–74, with reply by Latham, p. 475–76.]

SUZUKI, Y. Hanjidō takesshō-hyō kōjiku kaisekiki no kaihatsu [On a semi-automatic optical analyser for polycrystalline ice]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 45–56. [Description of a device to determine *c*-axis orientation of a crystal in a thin section of ice. English summary, p. 53–56.]

SUZUKI, S., *and* KUROIWA, D. Kōri no teimen ni arawareru ten'i shokuzō no seichō to undō [Growth of etch pits and movement of etch channels on the basal plane of ice]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 1–15. [Observation of development of etch pits and of etch channels which grow from etch pits in unstressed ice crystals. English summary, p. 14–15.]

TUSIMA [i.e. TSUSHIMA], K., *and* FUJII, T. Kōri no sendan kyōdo no sokutei [Measurements of shear strength of ice]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 33–43. [Measurements of shear strength of single crystals and polycrystalline ice by two different methods. English summary, p. 42–43.]

WALRAFEN, G. E. Raman spectra from partially deuterated water and ice VI to 10.1 kbar at 28° C. *Journal of Solution Chemistry*, Vol. 2, Nos. 2–3, 1973, p. 159–71. [Data and interpretation. Discussion by E. U. Franck, H. S. Frank, K. S. Pitzer, P. A. Giguère, G. S. Kell and the author, p. 168–71.]

LAND ICE. GLACIERS. ICE SHELVES

AGNEW OF LOCHNAW, C. H., *jr*. Map-making on the Patagonian ice-cap. *Geographical Magazine*, Vol. 46, No. 12, 1974, p. 709–13. [Short account of survey activities of the British Joint Services Expedition, 1972–73, on Hielo Patagonia del Norte, Chile.]

ARTEM'YEV, A. N. Godovoy i sutochnyy khod sostavlyayushchikh teplovogo balansa podstilayushchey poverkhnosti na antarkticheskom plato [Annual and daily variations of heat balance components of the underlying surface on the Antarctic plateau]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii*, No. 87, 1973, p. 44–48. [Compares conditions at Amundsen–Scott and Vostok stations.]

AUTENBOER, T. VAN, *and* DECLEIR, H. *Mass transport measurements in the Sør-Rondane, Dronning Maud Land, Antarctica. Preliminary report*. Bruxelles, Ministère des Affaires Économiques et de l'Énergie. Administration des Mines. Service Géologique de Belgique, 1974. [40] leaves. (Professional Paper 1974, No. 6.) [Earlier observations allow calculation of discharge of all major glaciers in area and evaluation of mass transport through 220 km long section at right angles to main flow from polar plateau.]

BAKER, G. Supraglacial meander channels on Storbreen and Storjuvbreen. *Horizon. Journal of King's College and the London School of Economics Geographical Association*, Vol. 21, 1972, p. 57–60. [Jotunheimen, south Norway.]

BARKOV, N. I., *and others*. Pervyye resul'taty izucheniya ledyanogo kerna iz skvazhiny so stantsii Vostok (Antarktida) isotopno-kislorodnym metodom [First results of studying an ice core from the Vostok station bore hole (Antarctica) by an oxygen-isotope method]. [By] N. I. Barkov, F. G. Gordiyenko, Ye. S. Korotkevich, V. M. Kotlyakov. *Doklady Akademii Nauk SSSR*, Tom 214, No. 6, 1974, p. 1383–86.

CHEREPANOV, N. V., *and* KOZLOVSKIY, A. M. Migratsiya rassola cherez gletchernyy led [Migration of brine through glacier ice]. *Informatsionnyy Byulleten' Sovetskoy Antarkticheskoy Ekspeditsii*, No. 87, 1973, p. 52–54. [Observations on fast ice at Mirny.]

DOLGUSHIN, L. D., *and* OSIPOVA, G. B. Pul'siruyushchiye ledniki [Glacier surges]. *Priroda*, 1974, [No.] 2, p. 85–99. [Describes some recent surges from the Northern Hemisphere, particularly Lednik Medvezhiy in 1964–68 and 1972–73.]

FAHL, C. B. Some relationships between glaciers and climate in Alaska. *Dissertation Abstracts International*, B, Vol. 34, No. 4, 1973, p. 1681-B. [Discusses use of mean pressure maps constructed for McCall, Gulkana and Wolverine glaciers for particular seasons and climatic conditions that contributed to glacier growth and decay. Abstract of Ph.D. thesis, University of Alaska, 1973. University Microfilms order no. 73-24063.]

KLUGA, A. M., *and others*. Nekotoryye rezul'taty radiolokatsionnogo zondirovaniya lednikov v Antarktide letom 1970/71 g. [Some results of radio echo sounding of Antarctic glaciers in summer 1970–71]. [By] A. M. Kluga, G. V. Trepov, B. A. Fedorov, G. P. Khokhlov. *Trudy Sovetskoy Antarkticheskoy Ekspeditsii*, Tom 61, 1973, p. 151–63. [Studies in area of "Molodezhnaya" station.]

KOZARSKI, S., *and* SZUPRYCZYŃSKI, J. Studia nad genezą stożków ablacyjnych na czole lodowca Sidu (Islandia) [Studies of origin of ablation cones at snout of Síðujökull (Iceland)]. *Przegląd Geograficzny*, Tom 45, Zeszyt 2, 1973, p. 309–25. [Describes cones and discusses possible modes of formation. English summary, p. 323–25.]

LEIGH, C. Short-term studies of the Storbreen glacier snout sub-system. *Horizon. Journal of King's College and the London School of Economics Geographical Association*, Vol. 21, 1972, p. 74–77. [Reports measurement of fluctuations of snout, vertically and horizontally, over periods of several days during summer 1970 and 1971. Jotunheimen, south Norway.]

MAKSIMOV, YE. V. Dinamika lednikov ostrova Paramushir [Dynamics of the glaciers of Ostrov Paramushir]. *Izvestiya Vsesoyuznogo Geograficheskogo Obshchestva*, Tom 105, Vyp. 6, 1973, p. 499–506. [Kuril'skiye Ostrova.]

MARSHALL, P., *and* BROWN, M. C. Ice in Coulthard Cave, Alberta. *Canadian Journal of Earth Sciences*, Vol. 11, No. 4, 1974, p. 510–18. [Describes crystallographic studies on oriented ice samples from cave and suggests mode of origin. Although temperatures in cave never exceed 0° C, slow erosion by sublimation at rate of 3 mm/yr takes place.]

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OMMANNEY, C. S. L., *and* CLARKSON, J. W. *Information booklet for ICEREF, the bibliography of Canadian glaciers.* Ottawa, Environment Canada. Inland Waters Directorate. Water Resources Branch, 1973. ix, 123 p. (Glacier Inventory Note No. 8; Inland Waters Directorate. Report Series No. 27.) [Describes procedures to be followed in listing references for inclusion in bibliography.]

PREW, R. D., *and* LEGG, B. J. An unusual freezing phenomenon. *Weather*, Vol. 29, No. 6, 1974, p. 217, 219. [Hollow triangular ice column, 5 cm tall, formed on ice covering soil in bucket. Minimum temperature for previous night was −4.5° C.]

RÖTHLISBERGER, H. Möglichkeiten und Grenzen der Gletscherüberwachung. *Neue Zürcher Zeitung*, 1974, Nr. 196, 15 p. [Discusses specific case histories of glacier catastrophes, and considers chances of predicting or preventing similar events.]

SATOW, K., *and others*. Distribution of firn temperatures in Mizuho plateau and west Enderby Land, east Antarctica, [by] K. Satow, O. Watanabe and C. Nakajima. *Nankyoku Shiryō: Antarctic Record*, [No.] 48, 1974, p. 52–69. [Presents results of measurements made at 2 m and 10 m depths, and discusses relationships between these and topographical and climatological features of region.]

THOMAS, R. H. The dynamics of the Brunt Ice Shelf, Coats Land, Antarctica. *British Antarctic Survey. Scientific Reports*, No. 79, 1973, 45 p. [Observations along 70 km flow line show that 1 m of ice is melted per year from beneath the ice shelf and suggest that bottom melting is widespread. Discusses effects of Dalgliesh ice stream and McDonald ice rumples on behaviour of ice shelf.]

VEYRET, P. Les glaciers du Massif du Mont Blanc (versant nord) durant les étés 1971, 1972, 1973. *Revue de Géographie Alpine*, Tom. 62, Fasc. 2, 1974, p. 137–51. [Reports further observations on the glaciers of the Arve and Trient valleys, dealing with glacier movements, problems of the ice itself, moraines, and glacial erosion.]

WAKAHAMA, G., *and others*. Hyōga-nai shintōsui no kansoku [Observations of permeating water through a glacier body]. [By] G. Wakahama [and 6 others]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 209–20. [Describes field studies on Mendenhall Glacier, Alaska, and discusses results on water permeability, speed of flow of melt water through the glacier during ablation, and the nature of water tubes formed within the glacier. English summary, p. 217–19.]

YAMADA, T. Mizuho kansoku kyoten yori saishu sareta deiipu koā no P-ha S-ha denpa sokudo. I [P and S wave velocity of 75 m deep core sample at Mizuho camp, Mizuho plateau, east Antarctica. I]. *Teion-kagaku: Low Temperature Science*, Ser. A, [No.] 31, 1973, p. 291–94.

ICEBERGS. SEA, RIVER AND LAKE ICE

ALEKSEYEV, G. V., *and* BUZUYEV, A. YA. Bokovoye tayaniye l'da v razvod'yakh [Lateral melting of ice in polynyas]. *Trudy Arkticheskogo i Antarkticheskogo Nauchno-Issledovatel'skogo Instituta*, Tom 307, 1973, p. 169–78. [Arctic Ocean.]

ALEKSEYEV, G. V., *and* BUZUYEV, A. YA. Ob evolyutsii sistemy led-poverkhnostnyy sloy okeana v rayone dreyfa stantsii "Severnyy Polyus-16" [On the evolution of the ice–ocean surface system in the drift area of "North Pole-16" drifting station]. *Problemy Arktiki i Antarktiki*, Vyp. 42, 1973, p. 37–43. [Arctic basin.]

ARIKAYNEN, A. I. Nekotoryye osobennosti kolebaniy ledovitosti Arkticheskikh morey i ispol'zovaniye ikh dlya fonovogo prognoza [Peculiarities of variability of ice concentration of Arctic seas and their utilization for forecasting]. *Trudy Arkticheskogo i Antarkticheskogo Nauchno-Issledovatel'skogo Instituta*, Tom 307, 1973, p. 97–102.

ASVALL, R. P., *formerly* PYTTE, R., *and* ROEN, S. Experiences showing how increased winter flow through inland lakes influences ice conditions. *Hydrological Sciences Bulletin*, Vol. 19, No. 1, 1974, p. 53–61. [Deals with aspects of changes in temperature distribution in, and ice conditions on, lakes when subjected to increased winter flow, especially when inflowing water has high temperature (1 to 3° C).]

BOGORODSKIY, V. V., *and* TRIPOL'NIKOV, V. P. O kontraste elektromagnitnykh kharakteristik na granitse morskoy led–voda [Contrast of electromagnetic characteristics of the sea-ice–water boundary]. *Zhurnal Tekhnicheskoy Fiziki*, Tom 44, Vyp. 4, 1974, p. 835–38. [Observations on pack ice and one-year ice. English translation in *Soviet Physics—Technical Physics*.]

BULAVKIN, V. M. Ob effektivnosti ledovoy aviatsionnoy razvedki v arkticheskom moreplavanii [On the effectiveness of air ice reconnaissance in Arctic navigation]. *Trudy Arkticheskogo i Antarkticheskogo Nauchno-Issledovatel'skogo Instituta*, Tom 307, 1973, p. 194–98.

BUYNITSKIY, V. K. *Morskiye l'dy i aysbergi Antarktiki* [*Sea ice and icebergs of the Antarctic*]. Leningrad, Izdatel'stvo Leningradskogo Universiteta, 1973. 255 p. [General survey of current knowledge.]

BUZUYEV, A. YA., *and* FEDOROV, K. N. O skhodstve termicheskikh struktur v razvod'yakh sredi arkticheskikh l'dov i v presnovodnykh ozerakh [On similarities of thermal structure in leads between Arctic ice and in fresh water lakes]. *Problemy Arktiki i Antarktiki*, Vyp. 41, 1973, p. 99–101. [Effects of salinity on water temperature.]

CAMPBELL, K. J., *and* ORANGE, A. S. A continuous profile of sea ice and freshwater ice thickness by impulse radar. *Polar Record*, Vol. 17, No. 106, 1974, p. 31–41. [Describes electromagnetic sub-surface profiling (ESP) technique, tested in the Canadian Arctic by towing a sledge-mounted antenna behind a tracked vehicle containing the impulse system.]

CHEREPANOV, N. V. Osnovnyye rezul'taty issledovaniya kristallicheskoy struktury morskikh l'dov [Main results of research in sea ice crystal structure]. *Problemy Arktiki i Antarktiki*, Vyp. 41, 1973, p. 43–54.

CHEREPANOV, N. V., *and* KOZLOVSKIY, A. M. Tipizatsiya morskikh Antarkticheskikh l'dov po usloviyam ikh obrazovaniya [Antarctic sea ice types according to conditions of their formation]. *Problemy Arktiki i Antarktiki*, Vyp. 42, 1973, p. 49–58. [Eight types of ice described.]

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CORRENS, M. Eisverhältnisse des Peenestrom-Haffgebietes — ein Beitrag zur Hydrographie der Gewässer an der südlichen Ostseeküste. *Petermanns Geographische Mitteilungen*, Jahrg. 117, Quartalsht. 4, 1973, p. 268–78. [Study of sea ice conditions along the Baltic coast of East Germany, in the Usedom region.]

DUNBAR, MOIRA. *Winter ice reconnaissance in Nares Strait, 1972–73*. Ottawa, Defence Research Board. Defence Research Establishment Ottawa, 1974. iii l., 23 p. (DREO Technical Note No. 73-26.) [Ice consolidated even earlier than in previous year in response to another winter of comparatively calm winds.]

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FROST ACTION ON ROCKS AND SOIL. FROZEN GROUND. PERMAFROST

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ERRATA

Vol. 12, No. 65, p. 336. In the eleventh entry the pagination should read p. 7–9.

Vol. 12, Index, p. 549. Entry Gough, S.R. should read Gough, S. R., 332 (2 entries).

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